Calculus III, MATH 2326 -001 (52568) / Summer I, 2017

Taught by Prof. A. Korzeniowski, Math Department, UTA
Textbook Briggs, Cochran, Gillett, Calculus - Early Transcendentals, 2nd Edition
Class Time MoTuWeTh 1:00 pm – 3:00 pm, 109 PKH
Office Hrs MoTuWeTh 12:30 – 1:00 pm, 418 PKH
Contact korzeniowski@uta.edu, (817) 272-3595

COURSE CONTENT / STUDENT LEARNING OUTCOMES

Introduce vectors and vector-valued functions in two and three dimensions. Study partial derivatives, extrema of functions of several variables, chain rules, directional derivatives, multiple integration, line integrals, surface integrals, Green’s theorem, Stokes’ theorem, and the divergence theorem. Students will acquire the working knowledge of applying multivariable calculus to solving problems in Sciences, Engineering, Economics/Finance.

COURSE OUTLINE

1. Vector - Valued Functions
   - Vectors in the Plane and Three Dimensions
   - Dot Product, Cross Product
   - Calculus of Vector-valued Functions
   - Length of Curve, Curvature and Normal Vectors

2. Multi - Variable Functions
   - Planes, Surfaces
   - Partial Derivatives, Chain Rules
   - Directional Derivatives, Gradients, Tangent Planes
   - Maxima, Minima, Lagrange Multipliers

3. Multiple Integration
   - Double Integrals, Triple Integrals
   - Integration in Polar, Cylindrical, Spherical Coordinates
   - Integrals for Mass Calculations
   - Change of Variables in Multiple Integrals

4. Vector Calculus
   - Vectors Fields, Line Integrals, Conservative Fields
   - Green’s Theorem
   - Divergence, Curl, Surface Integrals
   - Stokes’ Theorem, Divergence Theorem

GRADING: 3 Tests [70%] / Final [30%], A [90-100], B [80-89], C [70-79], D [60-69]

ATTENDANCE POLICY: Due to fast-paced nature of the course, in order to succeed in the class, attendance is essential and strongly recommended.
Drop Policy. Students may drop or swap (adding and dropping a class concurrently) classes through self-service in MyMav from the beginning of the registration period through the late registration period. After the late registration period, students must see their academic advisor to drop a class or withdraw. Undeclared students must see an advisor in the University Advising Center. Drops can continue through a point two-thirds of the way through the term or session. It is the student's responsibility to officially withdraw if they do not plan to attend after registering. **Students will not be automatically dropped for non-attendance.** Repayment of certain types of financial aid administered through the University may be required as the result of dropping classes or withdrawing. For more information, contact the Office of Financial Aid and Scholarships (http://www.utexas.edu/scholarships).

**Americans with Disabilities Act.** The University of Texas at Arlington is committed to upholding U.S. Federal Law “Title IX” such that no member of the UT Arlington community shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity. For more information, visit www.utexas.edu/titleix.

**Academic Integrity.** All students enrolled in this course are expected to adhere to the UT Arlington Honor Code: 

> I pledge, on my honor, to uphold UT Arlington’s tradition of academic integrity, a tradition that values hard work and honest effort in the pursuit of academic excellence. I promise that I will submit only work that I personally create or contribute to group collaborations, and I will appropriately reference any work from other sources. I will follow the highest standards of integrity and uphold the spirit of the Honor Code.

Instructors may employ the Honor Code as they see fit in their courses, including (but not limited to) having students acknowledge the honor code as part of an examination or requiring students to incorporate the honor code into any work submitted. Per UT System Regents’ Rule 50101, §2.2, suspected violations of university’s standards for academic integrity (including the Honor Code) will be referred to the Office of Student Conduct. Violators will be disciplined in accordance with University policy, which may result in the student’s suspension or expulsion from the University.

**Student Support Services.** UT Arlington provides a variety of resources and programs designed to help students develop academic skills, deal with personal situations, and better understand concepts and information related to their courses. Resources include tutoring, major-based learning centers, developmental education, advising and mentoring, personal counseling, and federally funded programs. For individualized referrals, students may visit the reception desk at University College (Ransom Hall), call the Maverick Resource Hotline at 817-272-6107, send a message to resources@utexas.edu, or view the information at www.utexas.edu/resources.

**Electronic Communication.** UT Arlington has adopted MavMail as its official means to communicate with students about important deadlines and events, as well as to transact university-related business regarding financial aid, tuition, grades, graduation, etc. All students are assigned a MavMail account and are responsible for checking the inbox regularly. There is no additional charge to students for using this account, which remains active even after graduation. Information about activating and using MavMail is available at http://www.utexas.edu/oit/cs/email/mavmail.php.

**Student Feedback Survey.** At the end of each term, students enrolled in classes categorized as lecture, seminar, or laboratory shall be directed to complete a Student Feedback Survey (SFS). Instructions on how to access the SFS for this course will be sent directly to each student through MavMail approximately 10 days before the end of the term. Each student’s feedback enters the SFS database anonymously and is aggregated with that of other students enrolled in the course. UT Arlington’s effort to solicit, gather, tabulate, and publish student feedback is required by state law; students are strongly urged to participate. For more information, visit http://www.utexas.edu/sfs.

**Final Review Week.** A period of five class days prior to the first day of final examinations in the long sessions shall be designated as Final Review Week. The purpose of this week is to allow students sufficient time to prepare for final examinations. During this week, there shall be no scheduled activities such as required field trips or performances; and no instructor shall assign any themes, research problems or exercises of similar scope that have a completion date during or following this week unless specified in the class syllabus. During Final Review Week, an instructor shall not give any examinations constituting 10% or more of the final grade, except makeup tests and laboratory examinations. In addition, no instructor shall give any portion of the final examination during Final Review Week. During this week, classes are held as scheduled. In addition, instructors are not required to limit content to topics that have been previously covered; they may introduce new concepts as appropriate.

**Emergency Exit Procedures.** Should we experience an emergency event that requires us to vacate the building, students should exit the room and move toward the nearest exit on the 1st Floor. When exiting the building during an emergency, one should never take an elevator but should use the stairwells. Faculty members and instructional staff will assist students in selecting the safest route for evacuation and will make arrangements to assist handicapped individuals.